SAMPLE ANALYTICAL RESULTS

Private Water Well

ID No: SMC-23

San Mateo Creek Basin, New Mexico

Analyte	Units	EPA National Primary and Secondary Drinking Water Standards Maximum Contaminant Level (MCL)	New Mexico Water Quality Control Commission Standards for Ground Water of 10,000 mg/L TDS or Less [Human Health Standards, Other Standards for Domestic Water Supply, and Standards for Irrigation Use]	Well ID: SMC-23 12/9/2015	Well ID: SMC-23 Duplicate 12/9/2015
Radiological					
Gross Alpha	pCi/L	--	--	11.9 (+/-5.7)	9.8 (+/-5.6)
Gross Alpha Adjusted to Exclude Uranium	pCi/L	15		8.17	5.59
Gross Beta	mrem/year	4	--	ND	0.236 (+/-0.134)[a]
Radium-226	pCi/L	--	--	0.44 (+/-0.23)	0.32 (+/-0.2)
Radium-228	pCi/L	--	--	0.83 (+/-0.36)	0.77 (+/-0.37)
Combined Radium 226 + 228	pCi/L	5	30	1.27	1.09
Thorium-228	pCi/L	--	--	ND	ND
Thorium-230	pCi/L	--	--	0.242 (+/- 0.082)	0.139 (+/-0.065)
Thorium-232	pCi/L	--	--	ND	ND
Uranium-233/234	pCi/L	--	--	7 (+/-1.3)	6.7 (+/-1.2)
Uranium-235/236	pCi/L	--	--	ND	0.23 (+/-0.1)
Uranium-238	pCi/L	--	--	3.73 (+/-0.73)	4.21 (+/-0.81)
Metals, Dissolved					
Aluminum	mg/L	--	5	ND	0.023
Antimony	mg/L	--	--	ND	ND
Arsenic	mg/L	--	0.1	ND	0.00037
Barium	mg/L	--	1	0.011	0.011
Beryllium	mg/L	--	--	ND	ND
Cadmium	mg/L	--	0.01	ND	ND
Calcium	mg/L	--	--	610	590
Chromium	mg/L	--	0.05	ND	ND
Cobalt	mg/L	--	0.05	ND	ND
Copper	mg/L	--	1	ND	ND
Iron	mg/L	--	1	ND	ND
Lead	mg/L	--	0.05	0.00036	ND

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Magnesium	mg/L	--	--	150	150
Manganese	mg/L	--	0.2	ND	ND
Mercury*	mg/L	--	0.002	ND	ND
Molybdenum	mg/L	--	1	NA	NA
Nickel	mg/L	--	0.2	ND	ND
Potassium	mg/L	--	--	6.6	6.2
Selenium	mg/L	--	0.05	0.038	0.035
Silver	mg/L	--	0.05	ND	ND
Sodium	mg/L	--	--	270	260
Thallium	mg/L	--	--	ND	ND
Uranium	mg/L	--	0.03	0.013	0.013
Vanadium	mg/L	--	--	ND	0.0005
Zinc	mg/L	--	10	ND	ND
Metals, Total					
Aluminum	mg/L	0.05	--	ND	0.03
Antimony	mg/L	0.006	--	ND	ND
Arsenic	mg/L	0.01	--	ND	ND
Barium	mg/L	2	--	0.0085	0.0089
Beryllium	mg/L	0.004	--	ND	ND
Cadmium	mg/L	0.005	--	ND	ND
Calcium	mg/L	--	--	510	550
Chromium	mg/L	0.1	--	ND	ND
Cobalt	mg/L	--	--	ND	ND
Copper	mg/L	1.3	--	ND	ND
Iron	mg/L	0.3	--	ND	0.025
Lead	mg/L	0.015	--	ND	0.00023
Magnesium	mg/L	--	--	130	140
Manganese	mg/L	0.05	--	ND	ND
Mercury	mg/L	0.002	--	ND	ND
Nickel	mg/L	--	--	NA	ND
Potassium	mg/L	--	--	5.6	6
Selenium	mg/L	0.05	--	0.031	0.033
Silver	mg/L	0.1	--	ND	ND
Sodium	mg/L	--	--	230	250
Thallium	mg/L	0.002	--	ND	0.00004
Uranium	mg/L	0.03	--	0.012	0.012
Vanadium	mg/L	--	--	ND	ND
Zinc	mg/L	5	--	ND	ND
Wet/General Chemistry					
Alkalinity, Total as CaCO3	mg/L	--	--	190	180
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	190	180
Bromide	mg/L	--	--	0.66	0.79
Carbonate Alkalinity as CaCO3	mg/L	--	--	ND	ND
Chloride	mg/L	250	250	59	59
Fluoride	mg/L	2	1.6	0.56	0.47
Nitrate as N (Nitrogen)	mg/L	10	--	14	14
Nitrite as N	mg/L	1	--	ND	ND
Orthophosphate	mg/L	--	--	ND	ND
pH	pH Units	between 6.5 and 8.5	between 6 and 9	7.63	7.49
Sulfate	mg/L	250	600	2500	2200

Total Dissolved Solids	mg/L	500	1000	3800	3400

Notes:

[a] The Gross Beta level of 11.8 (+/- 6.7) pCi/L measured by the laboratory was converted to 0.236 mrem/year for comparison to the EPA MCL of 4 mrem/year

Primary Drinking Water Standard or Primary Maximum Contaminant Level (MCL)
Under the Safe Drinking Water Act, EPA has established health-based maximum contaminant levels (MCLs) for contaminants that may be present in drinking water and adversely affect public health. EPA Primary MCLs are the highest level or concentration of a contaminant allowed in drinking water of a public water system. They are enforceable standards that protect the users of a public water system. EPA does not regulate private drinking water wells.

Secondary Drinking Water Standard or Secondary MCL
EPA Secondary MCLs are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations such as taste, color and odor. These contaminants are not considered to present a risk to human health at the Secondary MCL. EPA does not enforce Secondary MCLs.

NM – Human Health Standards for Ground Water

NM – Other Standards for Domestic Water Supply

NM – Standards for Irrigation Use

2500 **Concentration Exceeds EPA and/or New Mexico Standard**

ND **Analyte Not Detected** [*An ND value means that the analyte was not detected above the laboratory Method Detection Limit (MDL). The MDLs are significantly below the EPA and New Mexico standards and, therefore, an ND indicates that if an analyte is present, it is at a very low concentration and well below the standard*]

NA **Not Analyzed/Not Applicable**

pCi/L **picocurries per Liter**

mrem/year **millirem per year**

mg/L **milligrams per Liter**

Dissolved Metals – For metals analysis, the New Mexico WQCC ground water standards are based on analysis of water samples which have been filtered to remove colloidal particles (fine sediment particles) that are suspended in the water. By removing the suspended colloidal particles through filtration, the concentrations of metals detected in the filtered sample should be representative of the dissolved metals that are mobile in ground water.

Total Metals – The EPA drinking water standards (MCLs) are based on the total concentrations of metals analyzed in an unfiltered water sample. The unfiltered water sample will including those concentrations of metals adsorbed to the fine colloidal particles that are suspended in the water. EPA guidance for ground water sampling is to use a low-flow sampling technique without filtration for subsequent metals analysis. The low-flow sampling technique is to limit the amount of suspended colloidal particles in the collected sample. Under such conditions, the collected samples should be representative of the dissolved and particulate metals that are mobile in the ground water.